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GAMI, TEJAL	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/559,141	FUJIMOTO ET AL.	
	Examiner	Art Unit	
	Tejal J. Gami	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *30 November 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Krewalk et al. (U.S. Patent Number: 4,682,091).

As to independent claim 1, Krewalk discloses a terminal device (Fig. 1 Radio-Shack Model computer 196) (see Col. 14, Lines 29-44) connectable to an automatic introduction apparatus for automatically introducing a target celestial object by controlling a rotation of an astronomical telescope around at least two axes (see Abstract), said terminal device (Fig. 1 Radio-Shack Model computer 196) (see Col. 14, Lines 29-44) comprising:

an input operation section for executing a command operation on said automatic introduction apparatus (see Col. 11, Lines 40-46); and

an image display section for indicating a star map image for a predetermined area (e.g., should currently be in view) on a celestial sphere in accordance with a

display scale factor (e.g., degrees declination right ascension) (see Col. 14, Lines 22-25), said input operation section having:

a rotation command means (e.g., commanded to position the telescope) for executing a command operation on a rotational driving of said astronomical telescope in a telescope control mode (e.g., tracking mode) (see Col. 13, Lines 35-39); and

a scale factor input means (e.g., degrees declination right ascension) (see Abstract) for executing an input specification of said display scale factor for said star map image displayed in said image display section (e.g., should currently be in view) (see Col. 14, Lines 16-25), wherein in said telescope control mode (e.g., tracking mode) (see Col. 13, Lines 35-39), a star map image corresponding to a position on a celestial sphere toward which said astronomical telescope is headed is displayed in said image display section (e.g., locate and track celestial object) (see Col. 14, Lines 8-15), while a speed of rotation (e.g., rate of pivot for the telescope) of said astronomical telescope controlled by said rotation command means is changed in accordance with a decreasing function of said display scale factor specified by said scale factor input means (see Col. 11, Lines 4-17; and Col. 13, Lines 31-33).

As to independent claim 5, Krewalk discloses a terminal device (Fig. 1 Radio-Shack Model computer 196) (see Col. 14, Lines 29-44) connectable to an automatic introduction apparatus for automatically introducing a target celestial object by controlling a rotation of an astronomical telescope around at least two axes (see

Abstract), said terminal device (Fig. 1 Radio-Shack Model computer 196) (see Col. 14, Lines 29-44) being comprising:

an input operation section for executing a command operation on said automatic introduction apparatus (see Col. 11, Lines 40-46);

an image display section for indicating a star map image for a predetermined area (e.g., should currently be in view) on a celestial sphere in accordance with a display scale factor (e.g., degrees declination right ascension) (see Col. 14, Lines 22-25);

an azimuth detection means for detecting an azimuth along the direction to which said terminal device is oriented (see Abstract); and

a gradient detection means (e.g., rate of tracking) for detecting a gradient along the direction to which said terminal device (e.g., PC 196) is oriented (see Col. 24, Lines 1-14), wherein said image display section includes a constellation quick reference mode (e.g., view catalog sequence 238) (see Col. 23, Lines 37-41) for displaying a star map image for a predetermined area which is observed along the direction specified by the azimuth (e.g., right ascension) detected by said azimuth detection means and the gradient (e.g., rate) detected by said gradient detection means at a current date and time and a longitude and latitude of an observation site (see Col. 22, Lines 13-68).

As to dependent claim 2, Krewalk teaches a terminal device in accordance with claim 1, in which a celestial object selecting mode is further provided (e.g., view catalog sequence 238), said mode allowing either of a target celestial object for automatic

introduction or a fundamental celestial object for alignment to be selected over the star map image displayed in said image display section (see Col. 23, Lines 37-64).

As to dependent claim 3, Krewalk teaches a terminal device in accordance with claim 2, in which said celestial object selecting mode (e.g., view catalog sequence 238) further allows the star map image to be displayed in said image display section independently from said position on said celestial sphere toward which said astronomical telescope is headed (see Col. 23, Lines 37-69).

As to dependent claim 4, Krewalk teaches a terminal device in accordance with claim 1, wherein an operation of said rotation command means (e.g., drive) allows said star map image displayed in said image display section to be scrolled (e.g., operator selects from a list) (see Col. 23, Lines 37-64).

As to dependent claim 6, Krewalk teaches a terminal device in accordance with claim 5, wherein in said constellation quick reference mode (e.g., view catalog sequence 238) (see Col. 23, Lines 37-41), at least one of a celestial object selecting mode (e.g., operator selects from a list) (see Col. 23, Lines 37-41) and a telescope control mode can be executed (e.g., tracking mode) (see Col. 13, Lines 35-39), said celestial object selecting mode allowing either of a target celestial object for automatic introduction or a fundamental celestial object for alignment to be selected over said star map image displayed in said image display section (e.g., view catalog sequence 238) (see Col. 23, Lines 37-64), and said telescope control mode providing a control of said astronomical telescope so as to be oriented toward a direction specified by the azimuth

detected (e.g., right ascension) by said azimuth detection means and the gradient detected (e.g., rate) by said gradient detection means (see Col. 22, Lines 13-68).

3. Claims 7-27 and 41-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Lemp (U.S. Publication Number 2002/0152620).

As to independent claim 7, Lemp discloses an automatic introduction apparatus for automatically introducing a target celestial object by controlling a rotation (e.g., angular orientation of the viewing axis) (see Paragraph [0018]) of an astronomical telescope (e.g., celestial object location COL device) (see Paragraph [0059]) around at least two axes (see Paragraph [0069]), said apparatus being characterized in comprising:

an image-capturing means for taking an image of celestial object (e.g., celestial object 14) (see Paragraph [0061]);

a celestial object database (e.g., celestial object database 62) (see Paragraph [0069]); and

a celestial object identification means (e.g., celestial object location COL device 10) (see Paragraph [0059]) for identifying a celestial object (e.g., celestial object 14) whose image has been captured by said image-capturing means (see Paragraph [0084]), by comparing said image of celestial object captured by said image-capturing means with a set of celestial object information in said celestial object database (see Paragraph [0070]), wherein an alignment process for defining a set of coordinate transformation information of a coordinate system in said astronomical telescope

relative to a celestial coordinate system is executed based on a set of position information for said celestial object identified by said celestial object identification means (see Paragraph [0019] and [0089]).

As to independent claim 10, Lemp discloses an automatic introduction apparatus for automatically introducing a target celestial object by controlling a rotation (e.g., angular orientation of the viewing axis) (see Paragraph [0018]) of an astronomical telescope (e.g., celestial object location COL device) (see Paragraph [0059]) around at least two axes (see Paragraph [0069]), said apparatus being characterized in comprising:

an image-capturing means for capturing an image of a celestial object (e.g., celestial object 14) (see Paragraph [0061]);

a celestial object database (e.g., celestial object database 62) (see Paragraph [0069]); and

a celestial object identification means (e.g., celestial object location COL device 10) (see Paragraph [0059]) for identifying a celestial object (e.g., celestial object 14) whose image has been captured by said image-capturing means (see Paragraph [0084]), by comparing said image of celestial object captured by said image-capturing means with a set of celestial object information in said celestial object database (see Paragraph [0070]), wherein said astronomical telescope is configured to be rotationally controllable (see Paragraph [0018]) so as to introduce said target celestial object into a center of a field of said astronomical telescope based on a set of position information for

said celestial object identified by said celestial object identification means (see Paragraph [0068] and [0084]).

As to independent claim 13, Lemp discloses an automatic introduction apparatus for automatically introducing a target celestial object by controlling a rotation (e.g., angular orientation of the viewing axis) (see Paragraph [0018]) of an astronomical telescope (e.g., celestial object location COL device) (see Paragraph [0059]) around at least two axes (see Paragraph [0069]), in which said automatic introduction apparatus is equipped with a Web server (e.g., internet 182) function via an electric communication means (see Paragraph [0073]), and thereby allows two-way data communication with a terminal device equipped with a Web browser (e.g., internet 182) function and one or more additional automatic introduction apparatuses via said electric communication means (see Paragraph [0072]-[0073] and [0095]-[0096]).

As to independent claim 14, Lemp discloses an automatic introduction apparatus for automatically introducing a target celestial object by controlling a rotation (e.g., angular orientation of the viewing axis) (see Paragraph [0018]) of an astronomical telescope (e.g., celestial object location COL device) (see Paragraph [0059]) around at least two axes (see Paragraph [0069]), in which said automatic introduction apparatus is equipped with a Web server (e.g., internet 182) function via an electric communication means (see Paragraph [0073]), and thereby allows two-way data communication with a plurality of terminal devices each equipped with a Web browser (e.g., internet 182) function via said electric communication means (see Paragraph [0073] and [0095]-[0096]).

As to independent claim 17, Lemp discloses a control system for an astronomical telescope (e.g., celestial object location COL device) (see Paragraph [0059]), comprising:

a plurality of automatic introduction apparatuses (see Paragraph [0072] and [0081]), each capable of controlling a rotation (e.g., angular orientation of the viewing axis) (see Paragraph [0018]) of its corresponding astronomical telescope (e.g., celestial object location COL device) (see Paragraph [0059]) to automatically introduce a target celestial object (see Paragraph [0010]); and

a single terminal device having a right of control of said plurality of automatic introduction apparatuses (e.g., auxiliary device 180) (see Paragraph [0072]), said plurality of automatic introduction apparatuses and said single terminal device being interconnected via an electric communication means (see Paragraph [0072]-[0073]).

As to independent claim 24, Lemp discloses a control system for an astronomical telescope (e.g., celestial object location COL device) (see Paragraph [0059]), comprising:

a plurality of terminal devices (see Paragraph [0072] and [0081]), each transmitting a request signal for an introduction of a celestial object via an electric communication means (e.g., physical conduit 184) (see Paragraph [0073]); and

an automatic introduction apparatus connected to said electric communication means and operable in response to said request signal for the introduction of a celestial object to control a rotation (e.g., angular orientation of the viewing axis) of a single astronomical telescope for automatically introducing a target celestial object (see

Paragraph [0018]-[0019]), wherein said automatic introduction apparatus, upon receipt of the request signal for the introduction of celestial object from each of said plurality of terminal devices (see Paragraph [0072]-[0073] and [0081]), assigns an execution sequence to said request signal for the introduction of celestial object in accordance with a predetermined sequence so as to allow respective target celestial objects to be introduced automatically and serially in accordance with said execution sequence (e.g., next) (see Paragraph [0019]).

As to dependent claim 8, Lemp teaches an automatic introduction apparatus in accordance with claim 7, wherein said image-capturing means is adapted to capture an image at a plurality of focal distances (see Paragraph [0059]), and said alignment process (see Paragraph [0019] and [0089]) includes the steps of:

capturing an image of a celestial object under a condition where said image-capturing means has been set at a focal distance for a wide angle side (see Paragraph [0025]);

identifying a celestial object in said celestial object image captured at said wide angle side (see Paragraph [0011]);

correcting said coordinate transformation information (e.g., translation) based on the position information of said identified celestial object (see Paragraph [0080]);

selecting a fundamental celestial object from said celestial object image captured at the wide angle side (see Paragraph [0050]);

controlling a rotation (see Paragraph [0018]) of said astronomical telescope so that said fundamental celestial object is introduced into a center of field in the captured image (see Paragraph [0068] and [0084]);

capturing an image of a celestial object under a condition where said image-capturing means has been shifted to a focal distance for a more telescopic side (see Paragraph [0059]);

identifying a celestial object (e.g., celestial object 14) in said celestial object image captured at the more telescopic side (see Paragraph [0084]);

correcting said coordinate transformation information (e.g., translation) based on the set of position information of said identified celestial object (see Paragraph [0080]); and

setting said image-capturing means sequentially (e.g., next) at different focal distances for the more telescopic side and repeating above respective steps until the fundamental celestial object is introduced into a center of field in the captured image with a sufficient precision (see Paragraph [0019]).

As to dependent claim 9, Lemp teaches an automatic introduction apparatus in accordance with claim 8, in which said alignment process is executed by using at least two fundamental celestial objects (see Paragraph [0019] and [0089]).

As to dependent claim 11, Lemp teaches an automatic introduction apparatus in accordance with claim 10, wherein said image-capturing means is adapted to capture an image at a plurality of focal distances (see Paragraph [0059]), and said automatically introducing process (see Paragraph [0010]) includes the steps of:

introducing said target celestial object automatically (see Paragraph [0010]);

capturing an image of a celestial object under a condition where said image-capturing means has been set to a predetermined focal distance (see Paragraph [0059]);

identifying a celestial object (e.g., celestial object 14) from said celestial object image captured by said image-capturing means (see Paragraph [0084]);

controlling said astronomical telescope to rotate (see Paragraph [0018]) so that said target celestial object is introduced into a center of field in the captured image based on the set of position information for said identified celestial object (see Paragraph [0068] and [0084]); and

setting said image-capturing means sequentially (e.g., next) at different focal distances for the more telescopic side and repeating the above respective steps until said target celestial object is introduced into the center of a field in the captured image with a sufficient precision (see Paragraph [0019]).

As to dependent claim 12, Lemp teaches an automatic introduction apparatus in accordance with claim 10, in which said celestial object identification means has a function to extract an area including a celestial object that has not been image-captured based on said celestial object images captured by said image-capturing means and to determine whether said target celestial object exists in said area (see Paragraph [0089]).

As to dependent claim 15, Lemp teaches an automatic introduction apparatus in accordance with claim 14, in which said electric communication means is further

provided with one or more additional automatic introduction apparatus (see Paragraph [0073]).

As to dependent claim 16, Lemp teaches an automatic introduction apparatus in accordance with claim 14, in which each of said plurality of terminal devices includes an input operation terminal for inputting a command (e.g., inputting data and commands) to said automatic introduction apparatus and a display terminal for indicating a set of received input and output information (see Paragraph [0062]).

As to dependent claim 18, Lemp teaches a control system for an astronomical telescope in accordance with claim 17, in which each of said automatic introduction apparatuses has a manipulation means for inputting a command (e.g., inputting data and commands) to said automatic introduction apparatus (see Paragraph [0062]), said manipulation means comprising at least one of:

an operation starting means for starting a control operation to the astronomical telescope based on a command signal from said terminal device (see Paragraph [0019] and [0089]); and

a priority manipulation means (e.g., queries) for giving a priority to a command from said manipulation means over a command from said terminal device regarding at least one operation of a corresponding astronomical telescope (see Paragraph [0062]).

As to dependent claim 19, Lemp teaches a control system for an astronomical telescope in accordance with claim 17, in which each of said plurality of automatic introduction apparatuses has a manipulation terminal for inputting a command (e.g., inputting data and commands) to said automatic introduction apparatus (see Paragraph

[0062]), and said system allows the right of control of said terminal devices to be transferred to either one of said plurality of manipulation terminals (see Paragraph [0062]).

As to dependent claim 20, Lemp teaches a control system for an astronomical telescope in accordance with claim 17, in which said terminal device is equipped with an individual control mode for exclusively controlling at least one specified automatic introduction apparatus (see Paragraph [0086]).

As to dependent claim 21, Lemp teaches a control system for an astronomical telescope in accordance with claim 17, in which said terminal device comprises a display means for displaying a set of received information from each automatic introduction apparatus (see Paragraph [0062]).

As to dependent claim 22, Lemp teaches a control system for an astronomical telescope in accordance with claim 21, in which said received information includes at least one of:

operation ending state for each one of said automatic introduction apparatuses (see Paragraph [0072]-[0073] and [0095]-[0096]);

information indicating a direction or a position on a celestial sphere to which each astronomical telescope is oriented (see Paragraph [0095]-[0096]);

electric mail (e.g., internet 182) information from a user of each automatic introduction apparatus (see Paragraph [0073] and [0095]-[0096]); and

image data of a celestial object taken through each astronomical telescope (see Paragraph [0095]-[0096]).

As to dependent claim 23, Lemp teaches a control system for an astronomical telescope in accordance with claim 17, in which said terminal device stores a set of information for alignment to be required for the automatic introduction in each one of said astronomical telescopes and re-establishes said information for alignment in each one of said automatic introduction apparatuses upon subsequent starting of said control system (see Paragraph [0019] and [0089]).

As to dependent claim 25, Lemp teaches a control system for an astronomical telescope in accordance with claim 24, in which said predetermined sequence (see Paragraph [0019] and [0089]) is defined by any one of:

1) a sequence (e.g., next) in which said request signal for introduction of celestial object received earlier by said automatic introduction apparatus has a priority over others (see Paragraph [0019] and [0089]);

2) in a case where said automatic introduction apparatus is equipped with a terminal device directly connected to said automatic introduction apparatus (see Paragraph [0072]-[0073]), a sequence in which the request signal for introduction of celestial object from other terminal device capable of being manipulated by said directly connected terminal device has a priority over others (see Paragraph [0019] and [0089]); and

3) in a case where a plurality of request signals for introduction of celestial object have different receipt times falling within a predetermined range (see Paragraph [0019] and [0089]), a sequence in which the request signal for introduction of a celestial object specifying target celestial objects located closer to the direction to which said

astronomical telescope is currently oriented has a priority over others (see Paragraph [0019] and [0089]), and based on the thus defined predetermined sequence (e.g., next), said execution sequence is assigned to said respective request signals for the introduction of a celestial object (see Paragraph [0019] and [0089]).

As to dependent claim 26, Lemp teaches a control system for an astronomical telescope in accordance with claim 24, in which each of said plurality of terminal devices comprises a display means (see Paragraph [0062]), said display means being capable of displaying (see Paragraph [0062]) at least one of:

operation ending state for each one of said automatic introduction apparatuses (see Paragraph [0072]-[0073] and [0095]-[0096]);

information indicating a direction or a position on a celestial sphere to which said astronomical telescope is oriented (see Paragraph [0095]-[0096]);

information concerning the celestial object (e.g., celestial object 14) to be introduced by said astronomical telescope (see Paragraph [0084]); and

image data of celestial object taken through said astronomical telescope (see Paragraph [0095]-[0096]).

As to dependent claim 27, Lemp teaches a control system for an astronomical telescope in accordance with claim 17, in which said automatic introduction apparatus comprises at least one of:

a stop means (e.g., input signal to processor) for executing an emergency stop of rotational driving of said astronomical telescope in case of interruption of communication with said terminal device (see Paragraph [0019]); and

an alarm means (e.g., sounding a beep) (see Paragraph [0067]) for giving an alarm sound or an alarm indication upon starting to drive said astronomical telescope (e.g., sky tours) (see Paragraph [0089]).

As to dependent claim 41, Lemp teaches an automatic introduction apparatus in accordance with claim 7, in which said celestial object database is renewed based on a set of celestial object information obtained via an electric communication means (e.g., database 62 may be updated through access to the Internet) (see Abstract and Paragraph [0095]).

As to dependent claim 42, Lemp teaches an automatic introduction apparatus in accordance with claim 7, in which an initial parameter for said alignment process is established automatically based on a set of position information of a celestial object identified by said celestial object identification means (see Paragraph [0019] and [0089]).

As to dependent claim 43, Lemp teaches a control system for an astronomical telescope in accordance with claim 24, in which said automatic introduction apparatus comprises at least one of:

a stop means (e.g., input signal to processor) for executing an emergency stop of rotational driving of said astronomical telescope in case of interruption of communication with said terminal device (see Paragraph [0019]); and

an alarm means (e.g., sounding a beep) (see Paragraph [0067]) for giving an alarm sound or an alarm indication upon starting to drive said astronomical telescope (e.g., sky tours) (see Paragraph [0089]).

As to dependent claim 44, Lemp teaches an automatic introduction apparatus in accordance with claim 10, in which said celestial object database is renewed based on a set of celestial object information obtained via an electric communication means (e.g., database 62 may be updated through access to the Internet) (see Abstract and Paragraph [0095]).

4. Claims 28-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Snoddy et al. (U.S. Publication Number 2004/0068564).

As to independent claim 28, Snoddy discloses a control system for an astronomical telescope (see Paragraph [0037]), comprising:

a controller having a function as a Web server computer (see Paragraph [0023]); and

a plurality of automatic introduction apparatuses (e.g., network of available telescopes) (see Abstract), each capable of controlling a rotation of its corresponding astronomical telescope (e.g., position settings) for automatically introducing a target celestial object (see Paragraph [0026]);

said controller and said plurality of automatic introduction apparatuses being interconnected via an electric communication means (e.g., centralized control) (see Paragraph [0033]), wherein each of said plurality of automatic introduction apparatuses transmits a set of observation information concerning said apparatus (e.g., information is accessed regarding each telescope) (see Abstract), and said controller executes a

predetermined service to each of said plurality of automatic introduction apparatuses based on each set of said observation information (see Paragraph [0026]).

As to independent claim 37, Snoddy discloses a control system for an astronomical telescope (see Paragraph [0037]), comprising a plurality of automatic introduction apparatuses (e.g., network of available telescopes) (see Abstract), each capable of controlling a rotation of its corresponding astronomical telescope (e.g., position settings) for automatically introducing a target celestial object (see Paragraph [0026]) and being interconnected to each other via an electric communication means (e.g., centralized control) (see Paragraph [0033]), wherein a sequential and shifting control of said plurality of automatic introduction apparatuses enables a serial tracking observation of a celestial object by a plurality of astronomical telescopes (see Abstract and Paragraph [0026]).

As to dependent claim 29, Snoddy teaches a control system for an astronomical telescope in accordance with claim 28, in which said observation information includes a set of information of an introduced celestial object (e.g., identifier of the celestial object) (see Paragraph [0037]), and said controller has a function for aggregating received sets of information of said introduced celestial objects and ranking said celestial objects with each other (e.g., ranking system) (see Paragraph [0053]) and executes at least one of services selected from a group consisting of:

1) a service for notifying said ranking information of the introduced celestial objects to said plurality of automatic introduction apparatuses (e.g., tiers) (see Paragraph [0053]);

2) a service for selecting at least one celestial object from said ranking information of the introduced celestial objects and instructing said plurality of automatic introduction apparatuses to introduce said celestial object (e.g., tiers) (see Paragraph [0053]); and

3) a service for instructing said plurality of automatic introduction apparatuses to introduce those celestial objects selected into a high ranking sequentially in accordance with said ranking information of the introduced celestial objects (e.g., tiers) (see Paragraph [0053]).

As to dependent claim 30, Snoddy teaches a control system for an astronomical telescope in accordance with claim 28, in which said controller has a function for classifying a type of user (e.g., novice, professional, experienced amateur) of each automatic introduction apparatus based on said received observation information (see Paragraph [0039]).

As to dependent claim 31, Snoddy teaches a control system for an astronomical telescope in accordance with claim 30, in which said type of user includes at least one item selected from a group consisting of a type of celestial object of interest, a learning level defined from a beginner to an expert and an observation style (e.g., novice, professional, experienced amateur) (see Paragraph [0039]).

As to dependent claim 32, Snoddy teaches a control system for an astronomical telescope in accordance with claim 30, in which said controller executes a control operation or a transmission of the celestial object information in association with

the classified type of user (e.g., novice, professional, experienced amateur) on each of said automatic introduction apparatuses as said service (see Paragraph [0039]).

As to dependent claim 33, Snoddy teaches a control system for an astronomical telescope in accordance with claim 32, in which said celestial object information includes at least one item of information selected from a group consisting of new celestial object introduction information, version-up information (e.g., current information) for said automatic introduction apparatus and menu information for celestial object introduction (e.g., menu) (see Paragraph [0039]).

As to dependent claim 34, Snoddy teaches a control system for an astronomical telescope in accordance with claim 28, in which said controller executes an arithmetic operation (e.g., calculations) on behalf of said automatic introduction based on said observation information (see Paragraph [0041]).

As to dependent claim 35, Snoddy teaches a control system for an astronomical telescope in accordance with claim 28, in which said automatic introduction apparatuses located at respective sites are connected with meteorological sensors (e.g., weather module 135) (see Paragraph [0030]-[0032]), wherein said controller receives a set of meteorological information detected by each of said meteorological sensors and provides a set of meteorological information associated with each site as said service (e.g., weather module 135) (see Paragraph [0030]-[0032]).

As to dependent claim 36, Snoddy teaches a control system for an astronomical telescope in accordance with claim 28, in which said controller provides either one form of service selected from a group consisting of a chat (e.g., e-mail) (see

Paragraph [0046]), a message board (e.g., scheduler) and a TV conference system as said service (see Paragraph [0037]), in which a use of said service is restricted such that the access is only allowed between the automatic introduction apparatuses determined to be in the observation of the same celestial object based on said observation information or between the automatic introduction apparatuses of the same type of users (e.g., user-initiated) (see Paragraph [0044]).

As to dependent claim 38, Snoddy teaches a control system for an astronomical telescope in accordance with claim 37, in which said respective astronomical telescopes whose rotations are controlled by said plurality of automatic introduction apparatuses have German-style equatorial mounts (e.g., observatory) (see Paragraph [0005]), wherein when an equatorial telescope of an astronomical telescope during the observation passes over the meridian, a control of said astronomical telescope is shifted to a control of an automatic introduction apparatus of another astronomical telescope having its lens barrel inverted previously (see Paragraph [0049]).

As to dependent claim 39, Snoddy teaches a control system for an astronomical telescope in accordance with claim 37, in which said plurality of automatic introduction apparatuses are disposed in different locations (see Paragraph [0041] and [0049]), wherein a set of information on a movement of a moving celestial object is transmitted by one of said plurality of automatic introduction apparatuses which is currently controlling an astronomical telescope engaged in an observation of said moving celestial object (e.g., suitable telescope) (see Paragraph [0041] and [0049]),

and the control is shifted sequentially to another of said plurality of automatic introduction apparatuses at another location expecting next emergence of said moving celestial object based on said movement information (e.g., suitable telescope) (see Paragraph [0041] and [0049]).

As to dependent claim 40, Snoddy teaches a control system for an astronomical telescope in accordance with claim 37, in which each of said plurality of automatic introduction apparatuses disposed in respective locations comprises an observation area detection means for detecting an area on a celestial sphere available for the celestial observation at its associated location (e.g., suitable telescope) (see Paragraph [0041] and [0049]), wherein when said astronomical telescope engaged in the observation changes its orientation to another area out of said area available for the celestial observation detected by said observation area detection means (e.g., suitable telescope) (see Paragraph [0041] and [0049]), the control is shifted sequentially to another of said plurality of automatic introduction apparatuses which has said out-of-area as its own area available for the celestial observation (e.g., suitable telescope) (see Paragraph [0041] and [0049]).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tejal J. Gami whose telephone number is (571) 270-1035. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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